LOX (Distal)
LOX "Work Plan"
RD-9 (Distal)
B-1 (Distal)
Northern Control
FSDF (Source)
Compound A (Source)
Delta (Source)
CTL-III (Distal)
CTL-III (Source)
Southern Control

SSFL Property Boundary
Administrative Boundary
RFI Sites
Shale Units
Drainages
Approximate Extent of Alluvium Thickness > 5 Feet

Monitoring Wells
- Chatsworth formation Well
- Near-Surface Groundwater Well

Near-Surface Groundwater
Approximate lateral extent of near-surface groundwater - February 2005
TCE Concentration Greater than 5 µg/L

Chatsworth formation Groundwater
TCE Concentration Greater than 5 µg/L
TCE Concentration Greater than 1000 µg/L

TCE Soil Vapor Results (Micrograms per Liter Vapor)
- < Detection Limit
- < 10 µg/Lv
- 10 to 100 µg/Lv
- 100 to 1,000 µg/Lv
- 1,000 to 10,000 µg/Lv
- >10,000 µg/Lv

Vapor Validation Sampling Locations
- Control Area Locations
- Distal Area Locations
- Source Area Locations
- LOX Work Plan Sampling Location (MWH, 2005b)

1,500 750 0 1,500 Feet

Notes:
1. Near-surface groundwater extent should be considered the maximum extent of because of record rainfall.
2. Chatsworth formation groundwater is found at depth throughout the entire extent of the figure coverage.
3. Near-surface groundwater extent and Chatsworth formation groundwater TCE contours represent recent 2004/2005 information obtained from Haley & Aldrich. Near-surface groundwater TCE contours represent 2003 conditions from MWH.
4. Validation sampling scope includes colocated groundwater, surface flux, and, if present, soil vapor / soil matrix samples.
5. Near-surface groundwater measured at LOX site during April/May 2005.

Santa Susana Field Laboratory
Ventura County, California

FIGURE 3-1

SUMMARY OF SAMPLING LOCATIONS FOR VALIDATION STUDY

MWH

Prepared by: MKI | Date: 10/28/05 | FILE: GIS/SSFL/TCE_FIGURE3-1.MXD

HDMSe00199253

SAMPLE LOCATIONS AT
SWMU 6.4
COMPOUND A FACILITY

Santa Susana Field Laboratory

MWH
MONTGOMERY WATSON HARZA

FIGURE
3-2

Legend

Vapor Migration Model Validation Sample Locations

- Control Area Locations
- Distal Area Locations
- Source Area Locations

Near-Surface Groundwater

- Near-Surface Groundwater TCE Concentration Greater than 5 µg/L
- Approximate Lateral Extent of Near-Surface Groundwater - February 2005

Chatsworth Formation Groundwater

- TCE Concentration Greater than 5 µg/L
- TCE Concentration Greater than 1000 µg/L
- Approximate Extent of Alluvium Thickness > 5 Feet

TCE Soil Vapor Results (Micrograms per Liter Vapor)

- < Detection Limit
- < 10 µg/Lv
- 10 to 100 µg/Lv
- 100 to 1,000 µg/Lv
- 1,000 to 10,000 µg/Lv
- >10,000 µg/Lv

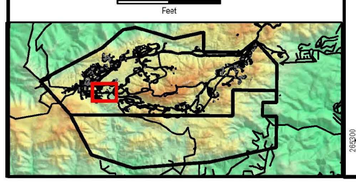
Notes:
1.) Validation sampling scope includes colocated groundwater, suface flux, and, if present, soil vapor / soil matrix samples.
2.) Near-surface groundwater extend and Chatsworth formation groundwater TCE coutours represent recent 2004/2005 information obtained from Haley & Aldrich. Near-surface groundwater TCE contours represent 2003 conditions from MWH.

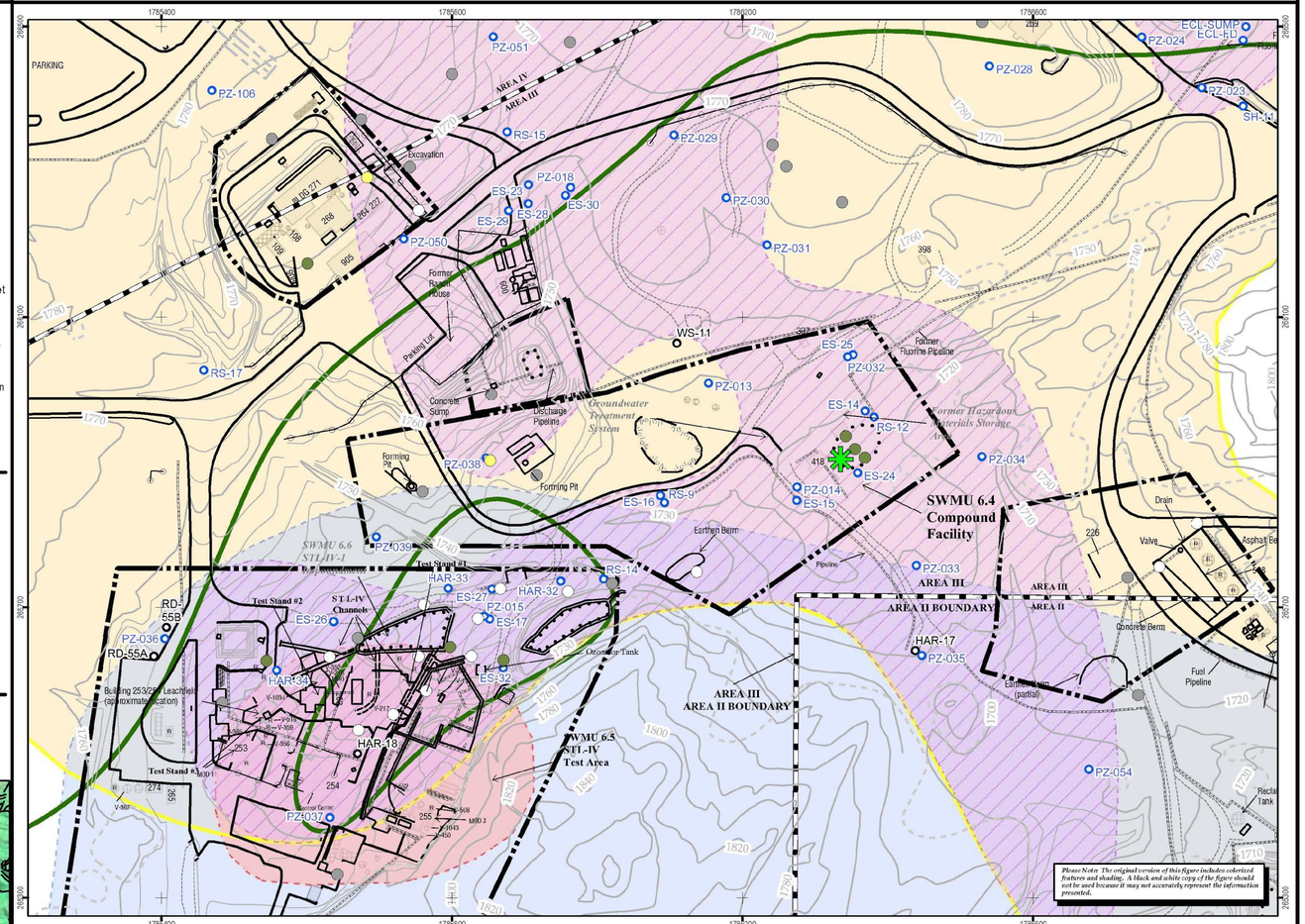
Base Map Legend

- Existing Building or Structure
- Removed Building or Structure
- Tanks (R Indicates Removed)
- Awnings
- Administrativa Area Boundary
- RFI Site Boundary
- Rocks Outcrops
- Leachfield
- Monitoring Wells
- Ground Elevation Contours
- A/C Curbing
- Dirt Road
- Ponds
- Possible Ponds (approx. location)
- Fences
- Pipes
- Creeks

Date: Oct 31, 2005
Filename: \yap\reck\plots\arcmap\VMMVS_CompoundA_CF_Situation.mxd

N
0 140
Feet





HDMSe00199254

SAMPLE LOCATIONS AT SWMU 7.3 FORMER SODIUM DISPOSAL FACILITY (FSDF)

Santa Susana Field Laboratory

MWH MONTGOMERY WATSON HARZA

FIGURE 3-3

Legend

Vapor Migration Model Validation Sample Locations

- Control Area Locations
- Distal Area Locations
- Source Area Locations

Near-Surface Groundwater

- Near-Surface Groundwater TCE Concentration Greater than 5 µg/L
- Approximate Lateral Extent of Near-Surface Groundwater - February 2005

Chatsworth Formation Groundwater

- TCE Concentration Greater than 5 µg/L
- TCE Concentration Greater than 1000 µg/L
- Approximate Extent of Alluvium Thickness > 5 Feet

TCE Soil Vapor Results (Micrograms per Liter Vapor)

- < Detection Limit
- < 10 µg/Lv
- 10 to 100 µg/Lv
- 100 to 1,000 µg/Lv
- 1,000 to 10,000 µg/Lv
- >10,000 µg/Lv

Notes:
1.) Validation sampling scope includes colocated groundwater, suface flux, and, if present, soil vapor / soil matrix samples.
2.) Near-surface groundwater extend and Chatsworth formation groundwater TCE coutours represent recent 2004/2005 information obtained from Haley & Aldrich. Near-surface groundwater TCE contours represent 2003 conditions from MWH.

Base Map Legend

- Existing Building or Structure
- Removed Building or Structure
- Tanks (R Indicates Removed)
- Awnings
- Administrative Area Boundary
- RFI Site Boundary
- Rocks Outcrops
- Leachfield
- Monitoring Wells
- Ground Elevation Contours
- A/C Curbing
- Dirt Road
- Ponds
- Possible Ponds (approx. location)
- Fences
- Pipes
- Creeks

Date: Oct 31, 2005
Filename: \\ap\rock\plots\arcmap\VMMVS_CompundA_CF_Situation.mxd

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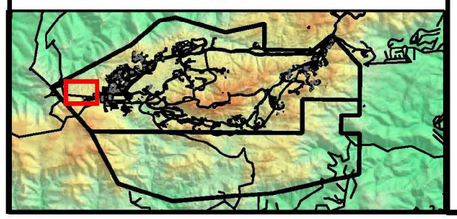
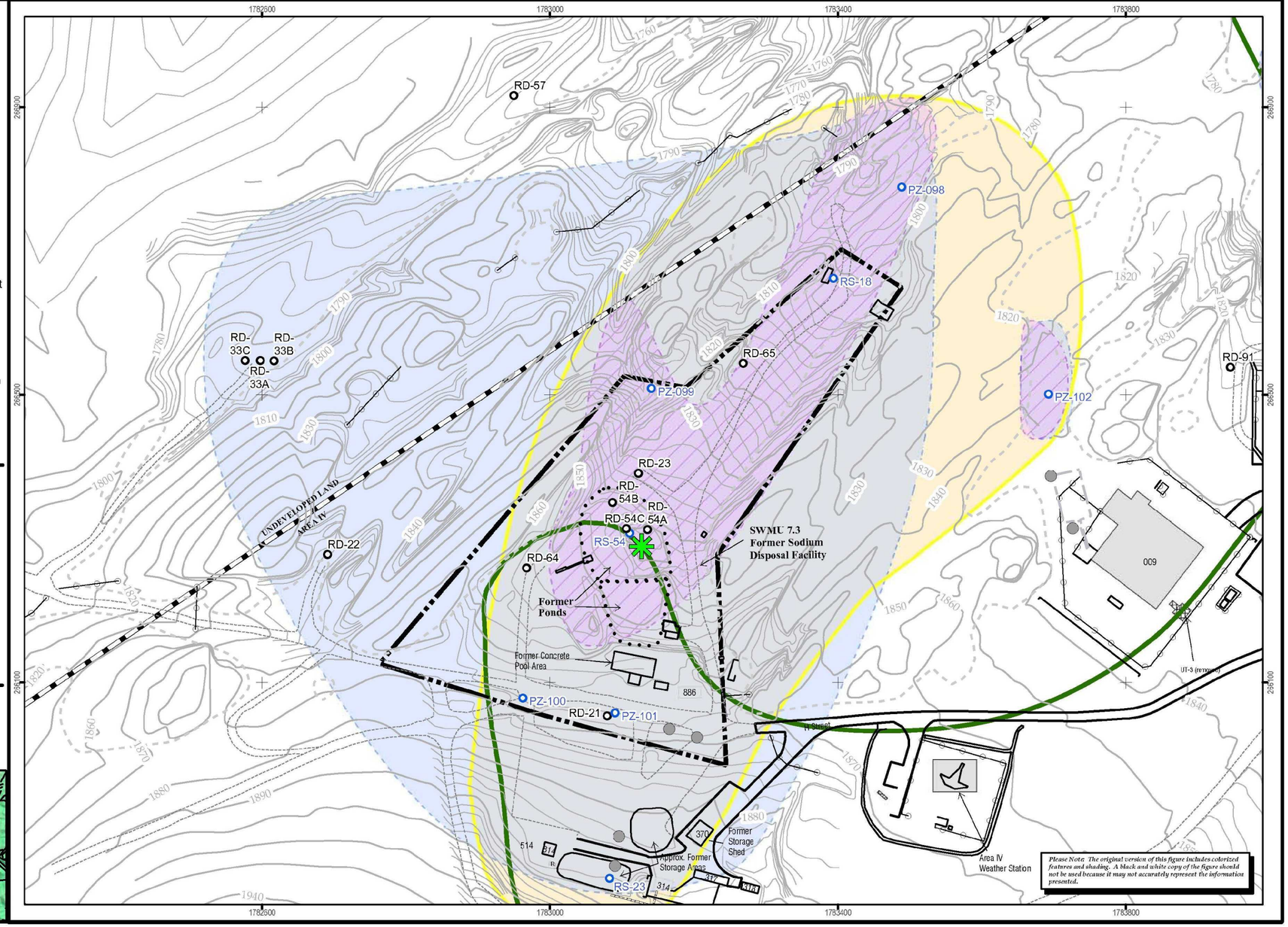
Feet





HDMSe00199255

SAMPLE LOCATIONS AT
SWMU 5.23
DELTA TEST STAND

Santa Susana Field Laboratory

MWH
MONTGOMERY WATSON HARZA

FIGURE
3-4

Legend

Vapor Migration Model Validation Sample Locations

- Control Area Locations
- Distal Area Locations
- Source Area Locations

Near-Surface Groundwater

- Near-Surface Groundwater TCE Concentration Greater than 5 µg/L
- Approximate Lateral Extent of Near-Surface Groundwater - February 2005

Chatsworth Formation Groundwater

- TCE Concentration Greater than 5 µg/L
- TCE Concentration Greater than 1000 µg/L
- Approximate Extent of Alluvium Thickness > 5 Feet

TCE Soil Vapor Results (Micrograms per Liter Vapor)

- < Detection Limit
- < 10 µg/Lv
- 10 to 100 µg/Lv
- 100 to 1,000 µg/Lv
- 1,000 to 10,000 µg/Lv
- >10,000 µg/Lv

Notes:
1.) Validation sampling scope includes colocated groundwater. suface flux, and, if present, soil vapor / soil matrix samples.
2.) Near-surface groundwater extend and Chatsworth formation groundwater TCE coutours represent recent 2004/2005 information obtained from Haley & Aldrich. Near-surface groundwater TCE contours represent 2003 conditions from MWH.

Base Map Legend

- Existing Building or Structure
- Removed Building or Structure
- Tanks (R Indicates Removed)
- Awnings
- Administrative Area Boundary
- RFI Site Boundary
- Rocks Outcrops
- Leachfield
- Monitoring Wells
- Ground Elevation Contours
- A/C Curbing
- Dirt Road
- Ponds
- Possible Ponds (approx. location)
- Fences
- Pipes
- Creeks

Date: Oct 31, 2005
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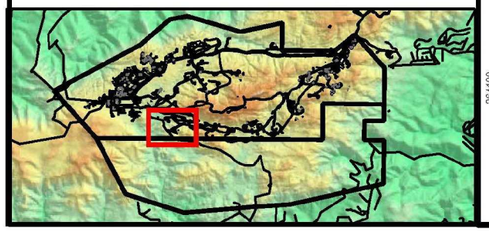
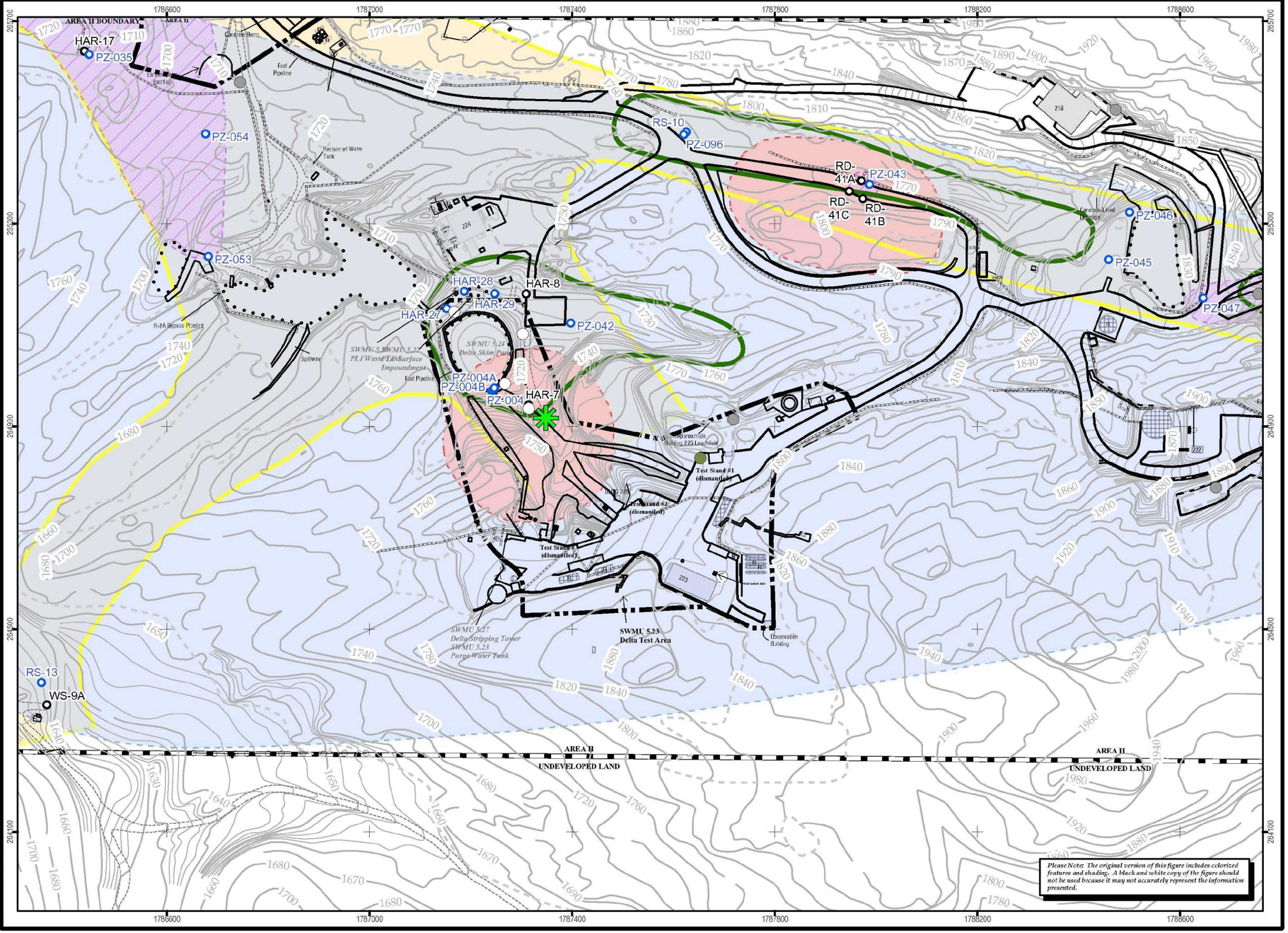
N

0 200
Feet





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HDMSe00199256

SAMPLE LOCATIONS AT SWMU 4.7 COMPONENT TEST LABORATORY (CTL-III)

Santa Susana Field Laboratory

MWH MONTGOMERY WATSON HARZA

FIGURE 3-5

Legend

Vapor Migration Model Validation Sample Locations

- Control Area Locations
- Distal Area Locations
- Source Area Locations

Near-Surface Groundwater

- Near-Surface Groundwater TCE Concentration Greater than 5 µg/L
- Approximate Lateral Extent of Near-Surface Groundwater - February 2005

Chatsworth Formation Groundwater

- TCE Concentration Greater than 5 µg/L
- TCE Concentration Greater than 1000 µg/L
- Approximate Extent of Alluvium Thickness > 5 Feet

TCE Soil Vapor Results (Micrograms per Liter Vapor)

- < Detection Limit
- < 10 µg/Lv
- 10 to 100 µg/Lv
- 100 to 1,000 µg/Lv
- 1,000 to 10,000 µg/Lv
- >10,000 µg/Lv

Notes:
1.) Validation sampling scope includes colocated groundwater, suface flux, and, if present, soil vapor / soil matrix samples.
2.) Near-surface groundwater extend and Chatsworth formation groundwater TCE coutours represent recent 2004/2005 information obtained from Haley & Aldrich. Near-surface groundwater TCE contours represent 2003 conditions from MWH.

Base Map Legend

- Existing Building or Structure
- Removed Building or Structure
- Tanks (R Indicates Removed)
- Awnings
- Administrative Area Boundary
- RFI Site Boundary
- Rocks Outcrops
- Leachfield
- Monitoring Wells
- Ground Elevation Contours
- A/C Curbing
- Dirt Road
- Ponds
- Possible Ponds (approx. location)
- Fences
- Pipes
- Creeks

Date: Oct 31, 2005
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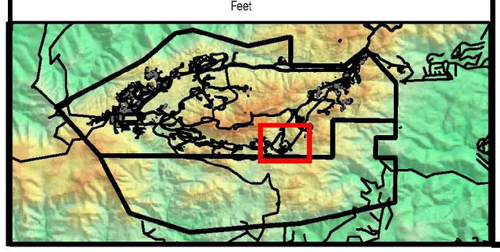
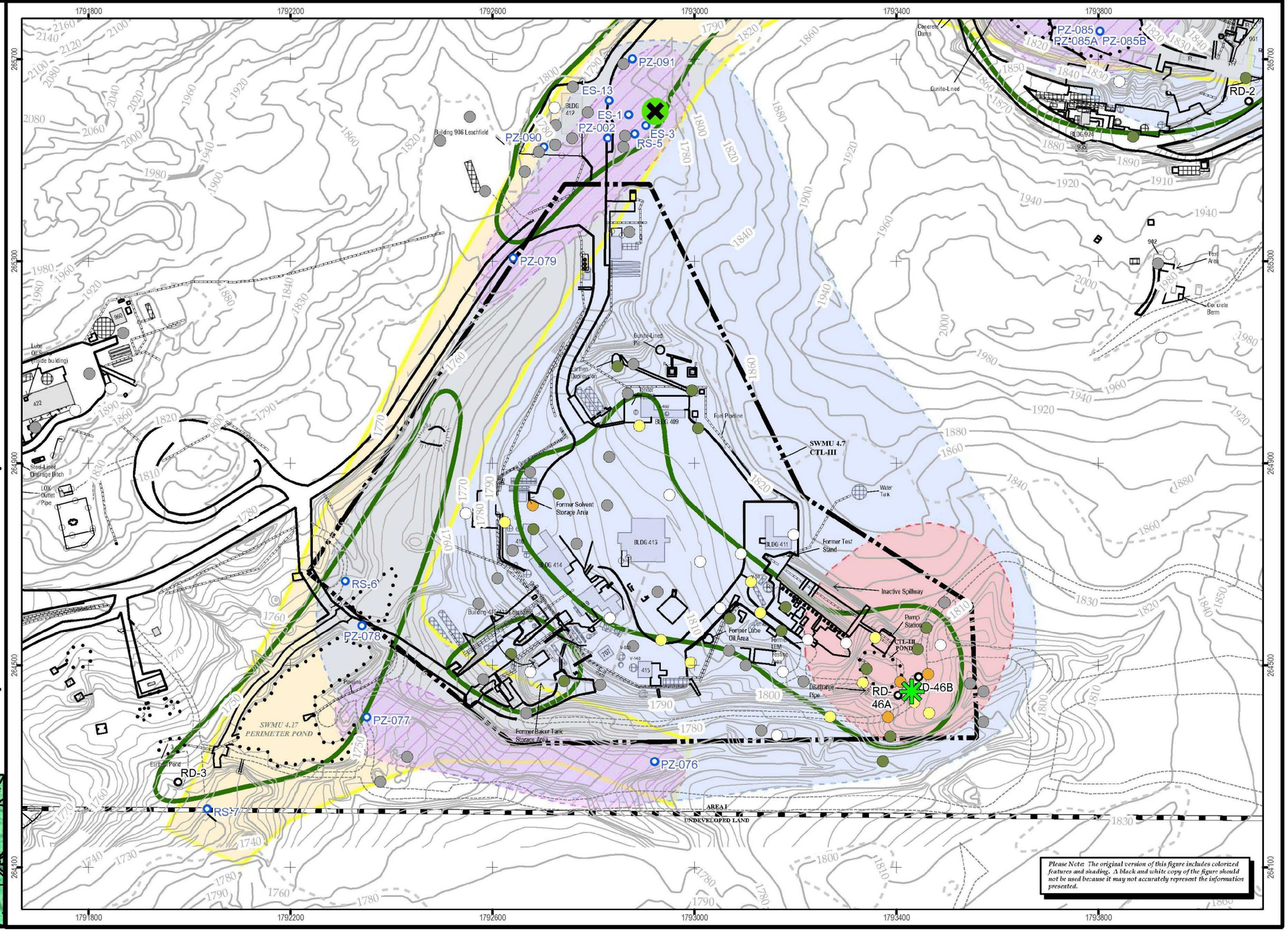
N

0 200
Feet





HDMSe00199257

SAMPLE LOCATIONS AT AREA II AOC BUILDING 515 AREA (RD-9 AREA)

Santa Susana Field Laboratory

MWH MONTGOMERY WATSON HARZA

FIGURE 3-6

Legend

Vapor Migration Model Validation Sample Locations

- Control Area Locations
- Distal Area Locations
- Source Area Locations

Near-Surface Groundwater

- Near-Surface Groundwater TCE Concentration Greater than 5 µg/L
- Approximate Lateral Extent of Near-Surface Groundwater - February 2005

Chatsworth Formation Groundwater

- TCE Concentration Greater than 5 µg/L
- TCE Concentration Greater than 1000 µg/L
- Approximate Extent of Alluvium Thickness > 5 Feet

TCE Soil Vapor Results (Micrograms per Liter Vapor)

- < Detection Limit
- < 10 µg/Lv
- 10 to 100 µg/Lv
- 100 to 1,000 µg/Lv
- 1,000 to 10,000 µg/Lv
- >10,000 µg/Lv

Notes:
1.) Validation sampling scope includes colocated groundwater, suface flux, and, if present, soil vapor / soil matrix samples.
2.) Near-surface groundwater extend and Chatsworth formation groundwater TCE coutours represent recent 2004/2005 information obtained from Haley & Aldrich. Near-surface groundwater TCE contours represent 2003 conditions from MWH.

Base Map Legend

- Existing Building or Structure
- Removed Building or Structure
- Tanks (R Indicates Removed)
- Awnings
- Administrative Area Boundary
- RFI Site Boundary
- Rocks Outcrops
- Leachfield
- Monitoring Wells
- Ground Elevation Contours
- A/C Curbing
- Dirt Road
- Ponds
- Possible Ponds (approx. location)
- Fences
- Pipes
- Creeks

Date: Oct 31, 2005
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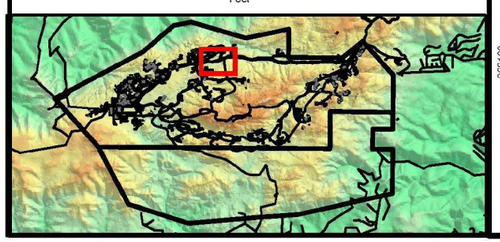
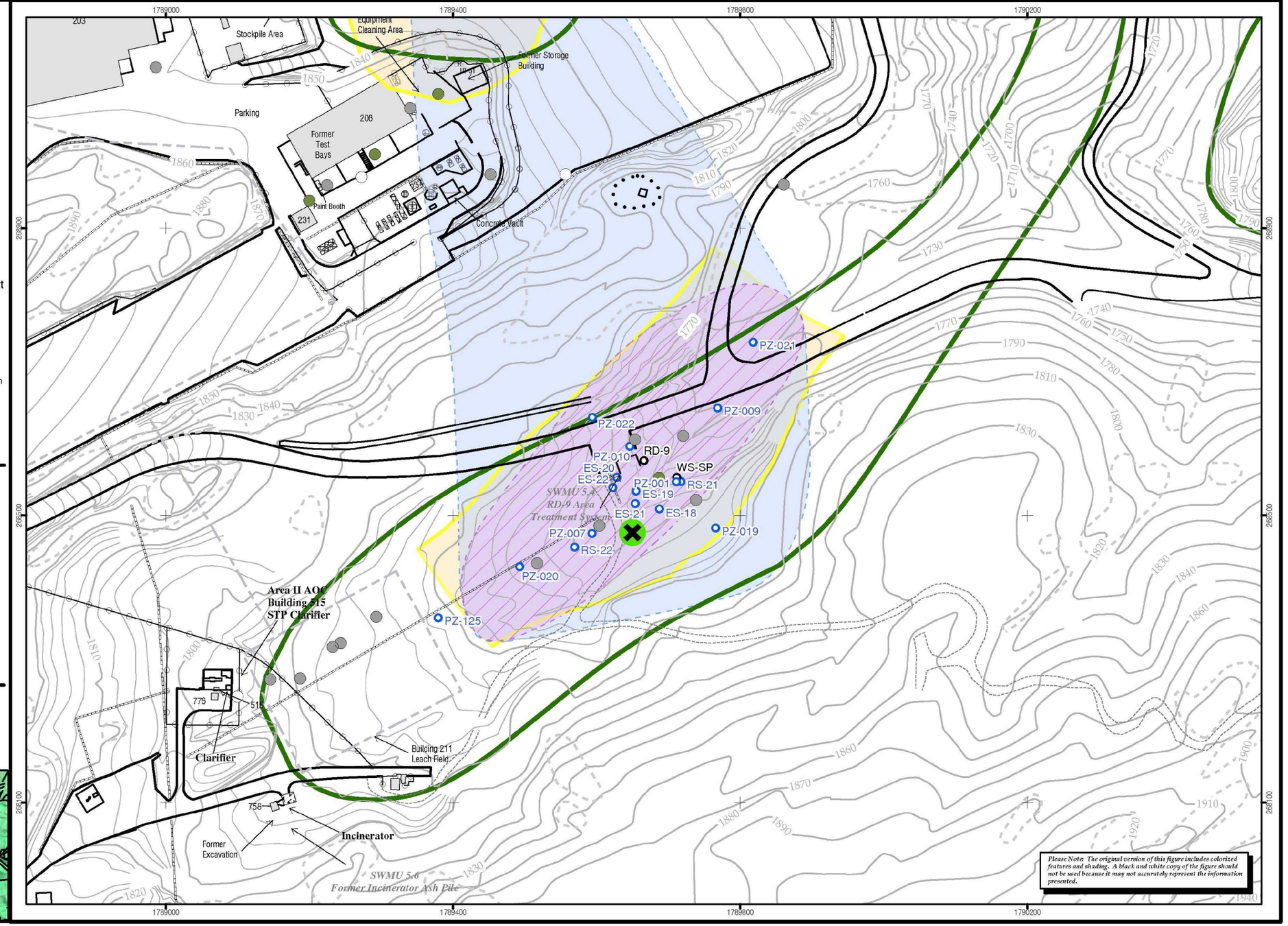
N

0 140
Feet





HDMSe00199258

SAMPLE LOCATIONS AT
SWMU 4.1
B-1 AREA

Santa Susana Field Laboratory

MWH
MONTGOMERY WATSON HARZA

FIGURE
3-7

Legend

Vapor Migration Model Validation Sample Locations

- Control Area Locations
- Distal Area Locations
- Source Area Locations

Near-Surface Groundwater

- Near-Surface Groundwater TCE Concentration Greater than 5 µg/L
- Approximate Lateral Extent of Near-Surface Groundwater - February 2005

Chatsworth Formation Groundwater

- TCE Concentration Greater than 5 µg/L
- TCE Concentration Greater than 1000 µg/L
- Approximate Extent of Alluvium Thickness > 5 Feet

TCE Soil Vapor Results (Micrograms per Liter Vapor)

- < Detection Limit
- < 10 µg/Lv
- 10 to 100 µg/Lv
- 100 to 1,000 µg/Lv
- 1,000 to 10,000 µg/Lv
- >10,000 µg/Lv

Notes:
1.) Validation sampling scope includes colocated groundwater, suface flux, and, if present, soil vapor / soil matrix samples.
2.) Near-surface groundwater extend and Chatsworth formation groundwater TCE coutours represent recent 2004/2005 information obtained from Haley & Aldrich. Near-surface groundwater TCE contours represent 2003 conditions from MWH.

Base Map Legend

- Existing Building or Structure
- Removed Building or Structure
- Tanks (R Indicates Removed)
- Awnings
- Administrative Area Boundary
- RFI Site Boundary
- Rocks Outcrops
- Leachfield
- Monitoring Wells
- Ground Elevation Contours
- A/C Curbing
- Dirt Road
- Ponds
- Possible Ponds (approx. location)
- Fences
- Pipes
- Creeks

Date: Oct 31, 2005
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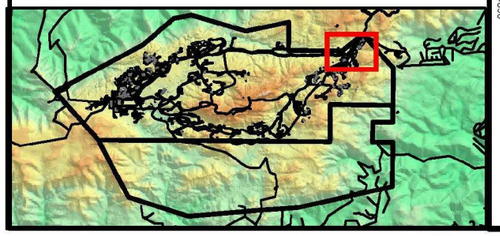
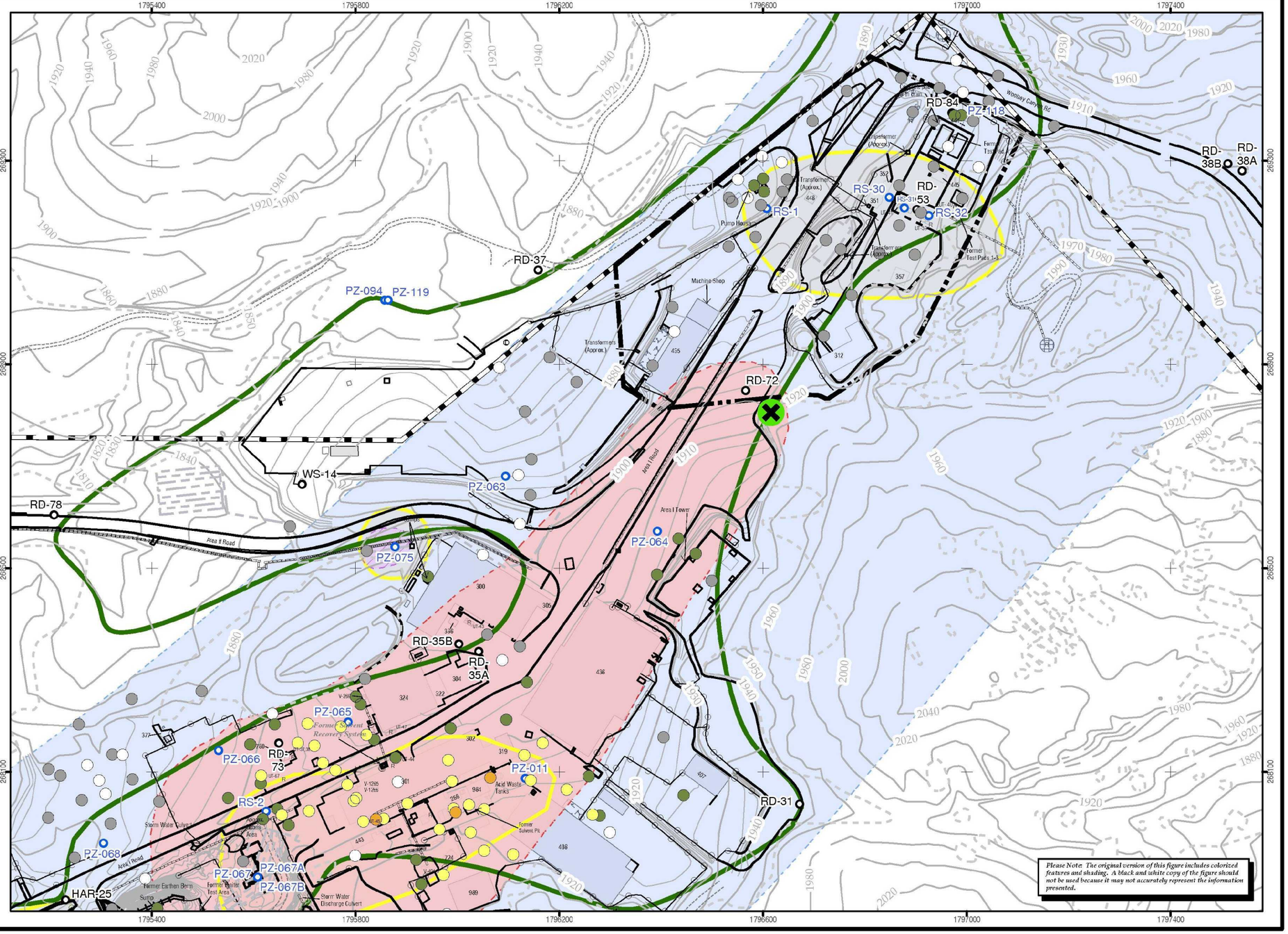
0 200
Feet





HDMSe00199259

SAMPLE LOCATIONS AT SWMUS 4.5 AND 4.6 LOX AREA

Santa Susana Field Laboratory

MWH MONTGOMERY WATSON HARZA

FIGURE 3-8

Legend

Vapor Migration Model Validation Sample Locations

- Control Area Locations
- Distal Area Locations
- Source Area Locations
- LOX Work Plan Sampling Location (MWH 2005b)

Near-Surface Groundwater

- Near-Surface Groundwater TCE Concentration Greater than 5 µg/L
- Approximate Lateral Extent of Near-Surface Groundwater - February 2005

Chatsworth Formation Groundwater

- TCE Concentration Greater than 5 µg/L
- TCE Concentration Greater than 1000 µg/L
- Approximate Extent of Alluvium Thickness > 5 Feet

TCE Soil Vapor Results (Micrograms per Liter Vapor)

- < Detection Limit
- < 10 µg/Lv
- 10 to 100 µg/Lv
- 100 to 1,000 µg/Lv
- 1,000 to 10,000 µg/Lv
- >10,000 µg/Lv

Notes:
1.) Validation sampling scope includes colocated groundwater, suface flux, and, if present, soil vapor / soil matrix samples.
2.) Near-surface groundwater extend and Chatsworth formation groundwater TCE coutours represent recent 2004/2005 information obtained from Haley & Aldrich. Near-surface groundwater TCE contours represent 2003 conditions from MWH.

Base Map Legend

- Existing Building or Structure
- Removed Building or Structure
- Tanks (R Indicates Removed)
- Awnings
- Administrative Area Boundary
- RFI Site Boundary
- Rocks Outcrops
- Leachfield
- Monitoring Wells
- Ground Elevation Contours
- A/C Curbing
- Dirt Road
- Ponds
- Possible Ponds (approx. location)
- Fences
- Pipes
- Creeks

Date: Oct 31, 2005
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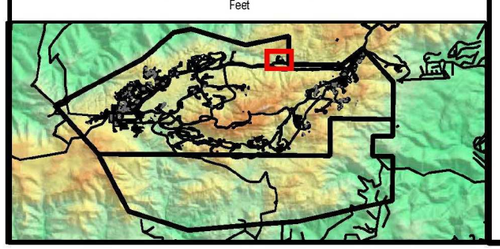
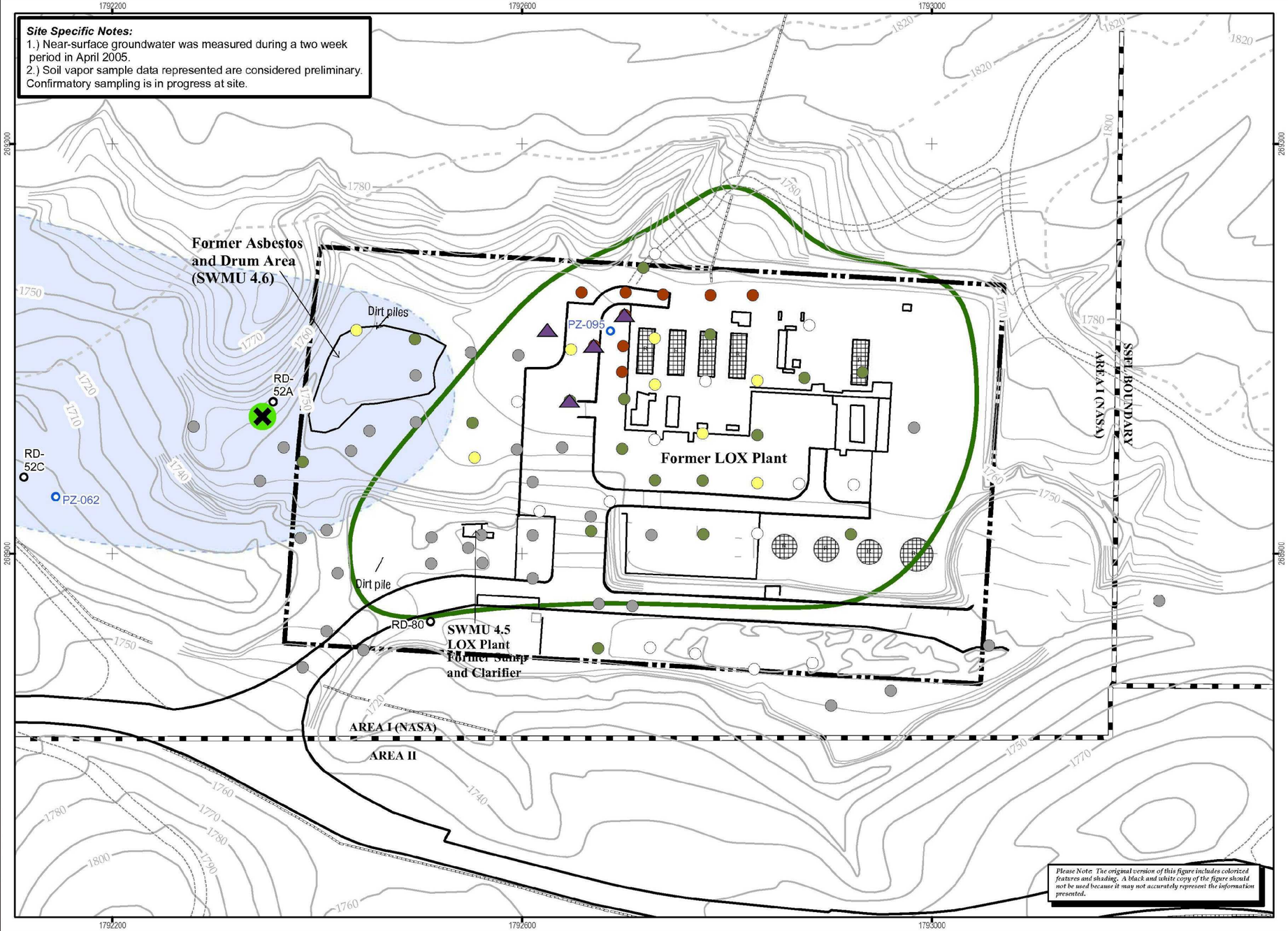
N

0 100
Feet



Site Specific Notes:
1.) Near-surface groundwater was measured during a two week period in April 2005.
2.) Soil vapor sample data represented are considered preliminary. Confirmatory sampling is in progress at site.



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HDMSe00199260

SAMPLE LOCATIONS AT CONTROL 1 (NORTH)

Santa Susana Field Laboratory

MWH MONTGOMERY WATSON HARZA

FIGURE 3-9

Legend

Vapor Migration Model Validation Sample Locations

- Control Area Locations
- Distal Area Locations
- Source Area Locations

Near-Surface Groundwater

- Near-Surface Groundwater TCE Concentration Greater than 5 µg/L
- Approximate Lateral Extent of Near-Surface Groundwater - February 2005

Chatsworth Formation Groundwater

- TCE Concentration Greater than 5 µg/L
- TCE Concentration Greater than 1000 µg/L
- Approximate Extent of Alluvium Thickness > 5 Feet

TCE Soil Vapor Results (Micrograms per Liter Vapor)

- < Detection Limit
- < 10 µg/Lv
- 10 to 100 µg/Lv
- 100 to 1,000 µg/Lv
- 1,000 to 10,000 µg/Lv
- >10,000 µg/Lv

Notes:
1.) Validation sampling scope includes colocated groundwater, surface flux, and, if present, soil vapor / soil matrix samples.
2.) Near-surface groundwater extend and Chatsworth formation groundwater TCE coutours represent recent 2004/2005 information obtained from Heley & Aldrich. Near-surface groundwater TCE contours represent 2003 conditions from MWH.

Base Map Legend

- Existing Building or Structure
- Removed Building or Structure
- Tanks (R Indicates Removed)
- Awnings
- Administrative Area Boundary
- RFI Site Boundary
- Rocks Outcrops
- Leachfield
- Monitoring Wells
- Ground Elevation Contours
- A/C Curbing
- Dirt Road
- Ponds
- Possible Ponds (approx. location)
- Fences
- Pipes
- Creeks

Date: Oct 31, 2005
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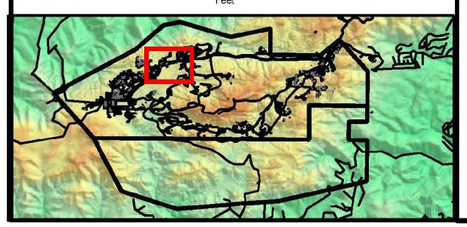
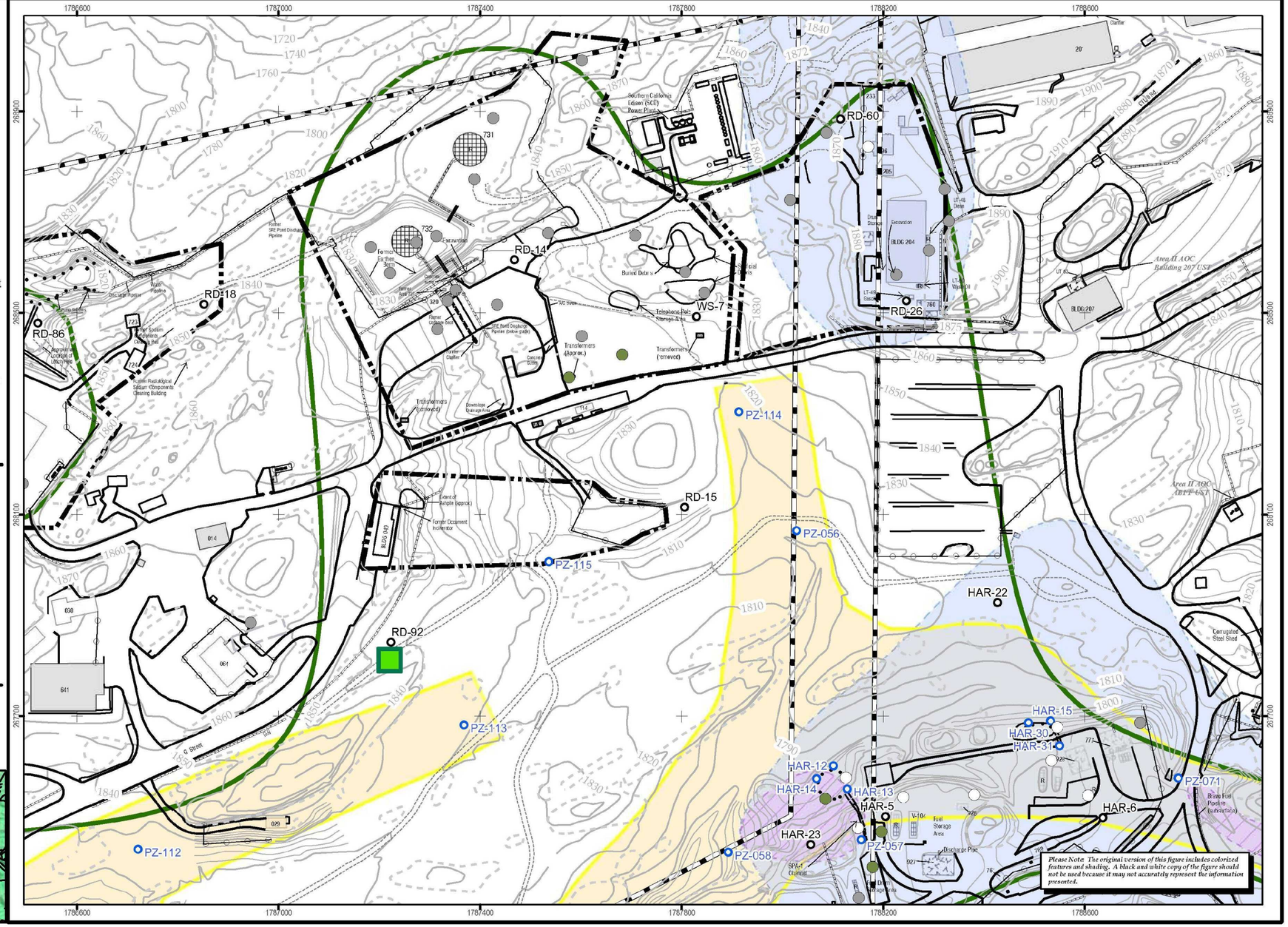
Feet





HDMSe00199261

SAMPLE LOCATIONS AT CONTROL 2 (SOUTH)

Santa Susana Field Laboratory

MWH MONTGOMERY WATSON HARZA

FIGURE 3-10

Legend

Vapor Migration Model Validation Sample Locations

- Control Area Locations
- Distal Area Locations
- Source Area Locations

Near-Surface Groundwater

- Near-Surface Groundwater TCE Concentration Greater than 5 µg/L
- Approximate Lateral Extent of Near-Surface Groundwater - February 2005

Chatsworth Formation Groundwater

- TCE Concentration Greater than 5 µg/L
- TCE Concentration Greater than 1000 µg/L
- Approximate Extent of Alluvium Thickness > 5 Feet

TCE Soil Vapor Results (Micrograms per Liter Vapor)

- < Detection Limit
- < 10 µg/Lv
- 10 to 100 µg/Lv
- 100 to 1,000 µg/Lv
- 1,000 to 10,000 µg/Lv
- >10,000 µg/Lv

Notes:
1.) Validation sampling scope includes colocated groundwater, suface flux, and, if present, soil vapor / soil matrix samples.
2.) Near-surface groundwater extend and Chatsworth formation groundwater TCE coutours represent recent 2004/2005 information obtained from Haley & Aldrich. Near-surface groundwater TCE contours represent 2003 conditions from MWH.

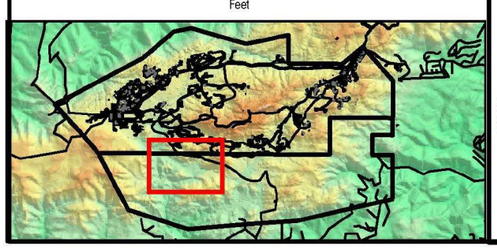
Base Map Legend

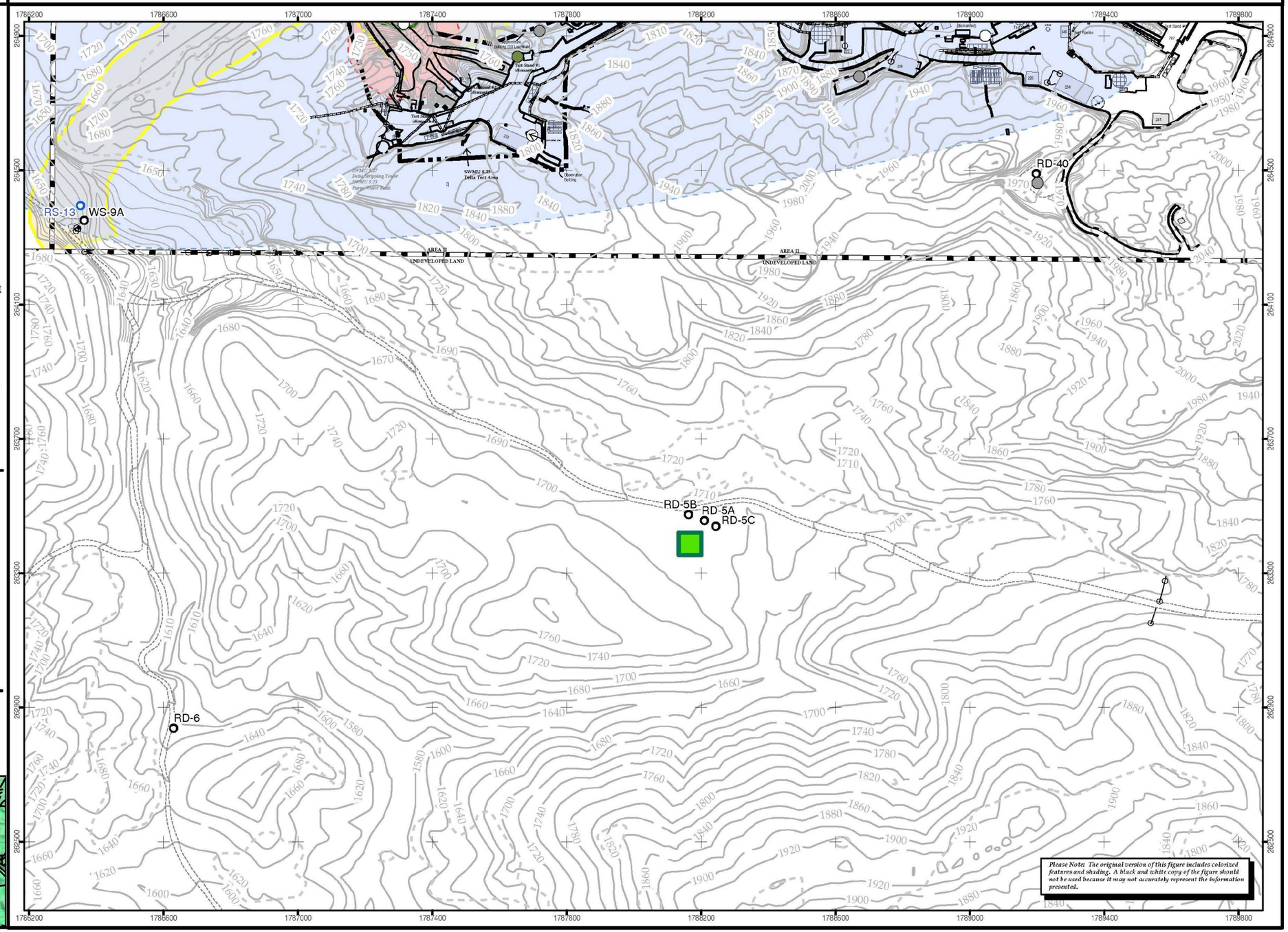
- Existing Building or Structure
- Removed Building or Structure
- Tanks (R Indicates Removed)
- Awnings
- Administrative Area Boundary
- RFI Site Boundary
- Rocks Outcrops
- Leachfield
- Monitoring Wells
- Ground Elevation Contours
- A/C Curbing
- Dirt Road
- Ponds
- Possible Ponds (approx. location)
- Fences
- Pipes
- Creeks

Date: Oct 31, 2005
Filename: \yap\rock\plots\arcmap\VMMVS_CompundA_CF_Situation.mxd

N

0 300
Feet





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HDMSe00199262